UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,930	12/30/2003	Angel Stoyanov	25277	1937

28624 7590 07/07/2006

WEYERHAEUSER COMPANY
INTELLECTUAL PROPERTY DEPT., CH 1J27
P.O. BOX 9777
FEDERAL WAY, WA 98063

EXAMINER	
CORDRAY, DENNIS R	
ART UNIT	**PAPER NUMBER**
1731	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/748,930	STOYANOV ET AL.	
	Examiner	Art Unit	
	Dennis Cordray	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16,18-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-16,18 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1,3-7, 9-12, 16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (6340411) in view of Cook et al (5562740) and further in view of Hatsuda et al (6562879).

Hansen et al discloses a crosslinked cellulosic product comprising cellulose fibers, one or more binders such as α-hydroxy polycarboxylic acid (citric or tartaric acid are preferred examples) and polyols (col 4, lines 32-45 and 56), and/or a densifying agent that can be a polyol (sorbitol is a preferred example) (col 59, lines 1-31). The disclosure teaches that both α-hydroxy polycarboxylic acids and polyols can cause intrafiber crosslinking (col 34, lines 4-6, 20-28) and can also be used as crosslinking agents provided precautions are taken to prevent all of the material from be used up for crosslinking (col 53, lines 37-64). The polyol can be present in an amount from 1% to 80 % by weight of the fibrous material (col 6, lines 8-10). Examples are given of the fibrous product with a wet bulk of 16.1 and 19.4 cc/g (col 41, lines 49-50).

Hansen does not teach a brightness greater than 69 or greater than 79 % ISO.

Cook et al discloses individualized citric acid crosslinked fibers (Abstract). Cook et al also teaches that improved brightness has a better aesthetic appeal to customers and discloses crosslinked fibers with a brightness of 86 (col 3, lines 9-12, 51-52).

Hansen et al and Cook et al do not disclose an "L" value greater than about 94.5, an "a" value between –1.55 and –0.60 or a "b" value less than 8.50.

Hatsuda et al discloses a structure containing a water-absorbent crosslinked polymer resin powder having color scale values "L" (lightness scale), "a" (red-green scale) and "b" (yellow-blue scale) as reproduced below (col 16, lines 6-12).

> The arbitrarily pulverized water-absorbent resin powder, according to the present invention, further has an L value of preferably not lower than 85 in lightness (lightness index), and an a value preferably in the range of +-2 and a b value preferably in the range of 0~9 both in chromaticity (chromaticness index), as measured with a device such as a spectroscopic color difference meter.

Hatsuda et al discloses an absorbent structure containing the crosslinked pulverized water-absorbent resin powder and cellulosic fibers and teaches that where the L-, a-, or b value deviates from the above range, brown coloring tends to be seen on the surface of the water-absorbent resin powder and particles of the water-absorbent resin might be seen in the form of yellowed spots in the absorbent structure that are not favorable to consumers." (col 16, lines 12-19).

The art of Hansen et al, Cook et al and Hatsuda et al and the instant invention are analogous because they are from the same science of providing water absorbent crosslinked polymers. The art of Cook et al, Hatsuda et al and the instant invention are also analogous as pertaining to solving the same problem of obtaining a color in absorbent products that is more appealing to consumers. It would have been obvious

at the time the invention was made to a person with ordinary skill in the art to obtain the claimed brightness and the claimed "L", "a", and "b" values in the fibers of Hansen et al in view of Cook et al and further in view of Hatsuda et al to make the crosslinked fibers aesthetically favorable and appealing to consumers.

Alternatively, the fibers of Hansen et al, when crosslinked with citric or tartaric acid in the presence of a polyol, as disclosed for some embodiments, have the same composition and structure as the claimed fibers. Where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. Thus, it would be obvious to obtain the claimed color, brightness and whiteness properties in the crosslinked fibers.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (6340411) in view of Cook et al (5562740) and further in view of Smith et al (US 2002/0090511) or Jewell et al (US 2003/0205342).

Hansen et al and Cook et al do not teach the use of malic acid as a crosslinking agent.

Smith et al discloses that citric, malic and tartaric acids are crosslinking agents for cellulosic fibers p 6, pars 71 and 74; pp 13-14, Tables 3 & 4). Smith et al also teaches that bleached fibers have superior brightness and consumer appeal (p 3, par

35). Although the pulp is bleached in Smith et al, the teaching is that bleaching increases brightness and that increased brightness is appealing to consumers.

Jewell et al teaches that citric acid, tartaric acid and malic acid are known in the art as crosslinking agents for cellulosic fibers (p 2, paragraph 24).

The art of Hansen et al, Cook et al, Jewell et al and the claimed invention are analogous because they are from the same science of providing chemically crosslinked fibers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art to use the claimed alpha-hydroxy polycarboxylic acids as crosslinking agents in the process of Hansen et al in view of Cook et al and further in view of Jewell et al as well known and functionally equivalent options.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 5-8 and 10-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

(renumbered) claims 1-9 and 11-12 of copending Application No. 10/748977. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed fibers in the instant invention are obvious by the method claimed in the copending application (i.e.-by following the method in the copending application, a person with ordinary skill in the art would expect to make the claimed fibers.

- Claim 1 of the instant application is obvious in view of Claims 1, 7-9 and 11-12 of the copending application for the reasons given above. Claim 1 of the copending application does not specify species of C_4-C_{12} polyols. Referenced Claims 7-9 and 11-12 above cite specific polyols in the C_4-C_{12} range. Since the claimed fibers would be made using the method of the copending application, the fibers would have the same properties of brightness and bulk for the reasons detailed in the above rejections.
- Claim 5 of the instant application reads the same as Claim 2 of the copending application if the word "method" is replaced by the word "fibers".
- Claim 6 of the instant application reads the same as Claim 3 of the copending application if the word "method" is replaced by the word "fibers", the words "α-hydroxy polycarboxylic" are inserted before the word "crosslinking", and the referenced Claim "2" is replaced by "5". The species listed in each claim are the same α-hydroxy polycarboxylic species.
- Claim 7 of the instant application reads the same as (renumbered) Claim 4 of the copending application if the word "method" is replaced by the word "fibers" and the referenced Claim "3" is replaced by "6".

- Claim 8 of the instant application reads the same as (renumbered) Claim 5 of the copending application if the word "method" is replaced by the word "fibers" and the referenced Claim "3" is replaced by "6".
- Claim 10 of the instant application reads the same as (renumbered) Claim 6 of the copending application if the word "method" is replaced by the word "fibers".
- Claim 11 of the instant application reads the same as (renumbered) Claim 7 of the copending application if the word "method" is replaced by the word "fibers" and the referenced (renumbered) Claim "6" is replaced by "10".
- Claim 12 of the instant application reads the same as (renumbered) Claim 8 of the copending application if the word "method" is replaced by the word "fibers" and the referenced (renumbered) Claim "7" is replaced by "11".
- Claim 13 of the instant application reads the same as (renumbered) Claim 9 of the copending application if the word "method" is replaced by the word "fibers" and the referenced Claim "6" is replaced by "10".
- Claim 14 of the instant application reads the same as (renumbered) Claim 11 of the copending application if the word "method" is replaced by the word "fibers" and the referenced Claim "6" is replaced by "10".
- Claim 15 of the instant application reads the same as (renumbered) Claim 12 of the copending application if the word "method" is replaced by the word "fibers" and using the renumbered referenced Claim "10".

This is a provisional obviousness- type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 1, 5-8, 10-12 and 16-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 and 13 of copending Application No. 10/815206.

- Claim 1 of the instant application is obvious in view of Claims 1 and 12 of the copending application. Claim 1 of the copending application does not specify a Whiteness Index. The instant application does not exclude the use of bleached fibers or of bleaching the fibers. The composition of the fibers in the copending application is the same as that in the instant application, and the properties (i.e.- Whiteness) of both products are expected to be similar
- Claim 5 of the instant application reads the same as Claim 2 of the copending application.
- Claim 6 of the instant application reads the same as Claim 3 of the copending application except that the claimed species are in a different order and if the referenced Claim "2" is replaced by "5".
- Claim 7 of the instant application reads the same as Claim 4 of the copending application if the referenced Claim "3" is replaced by "6".
- Claim 8 of the instant application reads the same as Claim 5 of the copending application if the referenced Claim "3" is replaced by "6".
- Claim 10 of the instant application reads the same as Claim 6 of the copending application.
- Claim 11 of the instant application reads the same as Claim 7 of the copending application if the referenced Claim "6" is replaced by "10".

- Claim 12 of the instant application reads the same as Claim 8 of the copending application if the referenced Claim "7" is replaced by "11".
- Claim 16 of the instant application specifies substantially the same brightness range as Claim 12 in the copending application.
- Claim 17 of the instant application specifies substantially the same wet bulk range as Claim 13 in the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1-8, 10, and 12-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/748969. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed fibers in the instant invention are included as a species of the invention claimed in the copending application.

- Claim 1 of the instant application is an obvious species of the product of Claim 1 of the copending application.
- Claim 2 of the instant application reads substantially the same as Claim 2 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 3 of the instant application reads substantially the same as Claim 3 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 4 of the instant application reads substantially the same as Claim 4 of the copending application if the word "product" is replaced by the word "fibers".

- Claim 5 of the instant application reads the same as Claim 5 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 6 of the instant application reads substantially the same as Claim 6 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 7 of the instant application reads the same as Claim 8 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 8 of the instant application reads the same as Claim 7 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 10 of the instant application reads the same as Claim 9 of the copending application if the words "absorbent product" is replaced by the word "fibers".
- Claim 12 of the instant application reads the same as Claim 10 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 13 of the instant application reads the same as Claim 11 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 14 of the instant application reads the same as Claim 12 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 15 of the instant application reads the same as Claim 13 of the copending application if the word "product" is replaced by the word "fibers".
- Claim 16 of the instant application specifies a brightness similar to that of Claim 14 of the copending application.

Response to Arguments

Applicants' arguments filed 19 May, 2006 have been fully considered but they are not persuasive. The reasons are as follows:

Applicant argues on p 4 that Hansen et al teaches that the binders that can also crosslink are polyols, polyaldehydes, polycarboxylic acids and polyamines, but does not reference alpha-hydroxypolycarboxylic acids as crosslinking agents. Hansen discloses that citric acid, an alpha-hydroxypolycarboxylic acid, is a polycarboxylic acid and a known crosslinking substance for cellulosic fibers (col 50, lines 49-50). Alpha-hydroxypolycarboxylic acids, such as citric acid, tartaric acid, malic acid, are well-known in the art as crosslinking agents for cellulosic fibers (see West et al, 5906894, col 3, lines 50-56 and 63-65; Jewell et al p 2, paragraph 24, or Smith et al, p 6, pars 71 and 74; pp 13-14, Tables 3 & 4). Jewell et al and West et al also label the above acids as polycarboxylic acids. Thus, the label "polycarboxylic acids" is known in the art to encompass alpha-hydroxypolycarboxylic acids.

Applicant argues on pp 4-5 that Hansen et al does not teach the combination of crosslinking agent and a polyol to achieve the object of the instant invention, but that they are used alone or in combination to achieve the binding effect of his invention. Hansen et al teaches that both alpha-hydroxy polycarboxylic acids and polyols can cause intrafiber crosslinking (col 34, lines 4-6, 20-28). The disclosure teaches the use of polycarboxylic acid, polyols and combinations thereof as species for use as a binder (col 4, lines 41-46). Preferred species of polycarboxylic acids include citric acid and tartaric acid, and (col 4, lines 52-59). Hansen et al teaches the use of the combination

of polycarboxylic acid and polyol (thus the polycarboxylic acid is in the presence of polyol). Hansen et al teaches that the same composition used as a binder can also be used to crosslink the fibers so long as precautions (the fibers should contain at least 20% water) are taken to prevent all of the binder from being consumed during the curing step. In column 34, lines 20-32, Hansen et al states:

> "Hence, in processes that use polycarboxylic acids, polyols and polyamines (which includes both polymeric and nonpolymeric amines having more than one amine group) as binders in the present invention, the fibers should contain at least 20% water (or 20-50% water) by weight if the particles and binder are present in the fibers when curing occurs. The water inhibits covalent bond formation, and prevents all of the binder from being used to form covalent intrafiber crosslinks. Hence, some of the binder remains available to form the non-covalent bonds with the particles and produce ease of densification in fiber products made by the process of the present invention."

In column 53, Example 32, lines 37-53, Hansen et al states:

> "The particle binders and particles of the present invention can be added before, after, or simultaneously with curing. The term "curing in the presence of the binder" means that the binder is added before or simultaneously with curing. Curing in the presence of the binder is not usually a problem because the binder cannot always participate in the intrafiber crosslinking reaction, and the binder is not affected by the curing step. In certain situations, however, the binder can also form covalent intrafiber crosslinks. Polycarboxylic acids (such as citric acid), polyols (such as

dipropylene glycol) and polyamines (such as ethylene diamine) can function as crosslinking agents, and are consumed during the curing step in the formation of covalent crosslinks. Hence in the limited case in which the crosslinking agent is also a binder material, steps should be taken to prevent the binder from being consumed as a crosslinker in the curing step" [emphasis added].

Both polyols and alpha-hydroxypolycarboxylic acids can be together in the claimed concentrations under crosslinking conditions with the fibers of Hansen et al. The binders disclosed by Hansen et al are thus capable of functioning together to crosslink the cellulosic fibers to provide the claimed product because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

Applicant argues that there is no teaching, suggestion or motivation to combine the disclosures of Hansen et al and Cook et al. Applicant further argues that Cook et al teaches a post-treatment of the crosslinked fibers to improve brightness rather than crosslinking of cellulose with a crosslinking agent in the presence of a polyol. The rational to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. *In re*

Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The instant claim language is directed to individualized intrafiber crosslinked fibers having certain color properties, but does not require those properties to be obtained as a result of the crosslinking process. Bleaching is a well known process in the art for whitening pulps, papers and other substrates and hydrogen peroxide is a preferred bleach in the art (Farr et al "Bleaching Agents" [online article] Kirk-Othmer Encyclopedia of Chemical Technology John Wiley & Sons 2003). Bleaching to improve the brightness of crosslinked cellulosic fibers is also known (Cook et al, Abstract; col 4, lines 51-54). It is known that crosslinking cellulosic fibers using citric acid can lead to yellowing of the fibers and unpleasant odors (Cook, col 3, lines 27-41). Cook et al teaches that obtaining low odor and higher brightness is desirable for the aesthetics of the fibers.

Smith et al also teaches that bleached fibers have superior brightness and consumer appeal (p 3, par 35). Although the pulp is bleached in Smith et al rather than the crosslinked fibers, the teaching is that bleaching increases brightness and that increased brightness is appealing to consumers. The motivation to combine the teachings of Cook et al and Hansen et al to bleach the crosslinked fibers would be obvious to one of ordinary skill in the art from this and the preceding paragraph describing potential problems from crosslinking and the general knowledge in the art that bleaching increases brightness and whiteness and improves the aesthetics of a product.

In response to applicant's argument that Hatsuda et al is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hansen et al, Cook et al, Hatsuda et al, and the instant invention all deal with absorbent materials and products made from the materials thus are in the field of applicant's endeavor. Cook et al, Hatsuda et al and the instant invention deal with the appearance (color, whiteness or brightness) and the effect of the appearance on consumer appeal, thus solve the same problem. Cook et al teaches that higher brightness is aesthetically appealing to customers (col 3, lines 8-12). Hatsuda et al discloses an absorbent structure containing the crosslinked pulverized water-absorbent resin powder and cellulosic fibers and teaches that where the L-, a-, or b values of the material deviate from the disclosed range, brown coloring tends to be seen on the surface of the water-absorbent resin powder and particles of the water-absorbent resin might be seen in the form of yellowed spots in the absorbent structure, a case not favorable to consumers." (col 16, lines 12-19). A person of ordinary skill in the art would obviously seek to provide an absorbent material with color properties that make it appealing to customers, whether in fibrous or powder form, and Hatsuda et al supplies guidelines for the color. Since Hansen et al, Cook et al, Hatsuda et al, and the instant invention all deal with crosslinked absorbent polymeric materials, and since Cook et al, Hatsuda et al and the instant application deal with solving the same problems, that of

providing more favorable color properties to the absorbent products, they are all analogous art. The motivation to combine the teachings of Hatsuda et al with Cook et al and Hansen et al is to improve the consumer appeal of the product and would be obvious to one of ordinary skill in the art.

Regarding rejection of claims 7-9, applicants have argued that the Jewell reference does not disclose the use of a crosslinking agent and a polyol or the treatment of color properties of the crosslinked fibers. As previously discussed and supported by several references, citric acid, tartaric acid and malic acid are well known crosslinking agents for cellulosic fibers, and Jewell et al was used merely to demonstrate the knowledge (p 2, par 24). The use of the claimed alpha-hydroxy polycarboxylic acids would have been obvious to one skilled in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRC

STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700